GOVERNMENT OF INDIA
SPACE
LOK SABHA

STARRED QUESTION NO:466
ANSWERED ON:23.04.2003
PROTECTION OF SATELLITES LAUNCH VEHICLES
YEMPARALA VENKATESWARA RAO

Will the Minister of SPACE be pleased to state:

(a) whether space junk is found to cause a lot of harm to the satellites and the launch vehicles;

(b) if so, the extent to which Indian satellites have faced this problem; and

(c) the methods adopted to avert the said problem?

Answer

MINISTER OF STATE IN THE MINISTRY OF PLANNING, MINISTER OF STATE IN THE MINISTRY OF STATISTIC PROGRAMME IMPLEMENTATION, MINISTER OF STATE IN THE DEPARTMENT OF ATOMIC ENERGY AND MINIST STATE IN THE DEPARTMENT OF SPACE (SHRI S.B. MOOKHERJEE)

(a),(b)&(c) A statement is laid on the Table of the House.

STATEMENT LAID ON THE TABLE OF THE LOK SABHA IN REPLY TO PARTS (a), (b) & (c) OF STARRED QUESTION NO. 46 REGARDING `PROTECTION OF SATELLITES/LAUNCH VEHICLES` BY SHRI Y.V. RAO FOR ANSWER ON APRIL 23, 2003

(a) Launch vehicles and satellites are exposed to possible risks of damage by space junk, also known as space debris. The probability of damage is, however, low.

(b) Indian Satellites have not experienced this problem so far.

(c) Close approaches of the catalogued space debris with our active and operational satellites are evaluated and appropriate avoidance measures are taken.

In the case of launch vehicles, the probability of collision is evaluated just prior to launch and the launch window is accordingly adjusted.

Similarly, satellites could be appropriately maneuvered out of collision path, if so required.

Adequate redundancy is built into systems to minimise the loss of functionality.

Measures are also taken to avoid debris creation by our launchers by making the spent stages passive and minimizing the operational debris by design.

ISRO also participates in Inter Agency Space Debris Coordination Committee (IADC) to develop international consensus on monitoring, mitigation, modeling, and prediction to minimise the risk due to space debris.